REMARKS

Fifty-one claims are pending in the present Application. Claims 1-51 currently stand rejected. Claims 1, 5-10, 21, 25-30, and 38 are amended herein. Reconsideration of the Application in view of the foregoing amendments and the following remarks is respectfully requested.

Claim Objections

In paragraph 1 of the Office Action, the Examiner objects to claims 5 and 25 for "informalities". In accordance with the Examiner's suggestion, Applicants herein amend claims 5 and 25 to delete the limitation "serial bus standard" in order to thereby correct the foregoing informalities. Applicants therefore respectfully request the Examiner to withdraw the objection to claims 5 and 25.

Double Patenting

In paragraph 7 of the prior Office Action mailed October 3, 2003, claims 3-5 and 23-25 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 16 of U.S. Patent No. 6,453,376 to Fairman et al. (hereafter Fairman). In the Response to Office Action mailed on December 16, 2003, Applicants traversed the foregoing rejection, with the following arguments.

Fairman is directed towards a "resource characterization set" that is utilized by an "allocation manager" to allocate guaranteed resources for a requested process. In contrast, Applicants' claimed invention is directed towards

implementing "a memory device . . . configured for storing said priority information". Applicants submit that Fairman nowhere teaches designating special memory locations for storing information such as isochronous data on a priority basis.

In the present Office Action, the Examiner has failed to indicate that the foregoing rejection has been withdrawn. For at least the foregoing reasons, Applicants therefore respectfully request the Examiner to withdraw the rejection of claims 3-5 and 23-25, and 50-51 under the judicially created doctrine of obviousness-type double patenting.

35 U.S.C. § 103

In paragraph 3 of the Office Action, the Examiner rejects claims 1-17, 21-37, and 41-51 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,192,428 to Abramson et al. (hereafter Abramson) in view of U.S. Patent No. 6,667,987 to Kwon et al. (hereafter Kwon). The Applicants respectfully traverse these rejections for at least the following reasons.

Applicants maintain that the Examiner has failed to make a *prima facie* case of obviousness under 35 U.S.C. § 103(a) which requires that three basic criteria must be met, as set forth in M.P.E.P. §2142:

> "First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation

of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The initial burden is therefore on the Examiner to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Applicants respectfully traverse the Examiner's assertion that modification of the device of Abramson according to the teachings of Kwon would produce the claimed invention. Applicants submit that Abramson in combination with Kwon fail to teach a number of the claimed elements of the present invention. Furthermore, Applicants also submit that neither Abramson nor Kwon contain teachings for combining the cited references to produce the Applicants' claimed invention. The Applicants therefore respectfully submit that the obviousness rejections under 35 U.S.C §103 are improper.

Regarding the Examiner's rejection of independent claims 1 and 21, Applicants respond to the Examiner's §102 rejection as if applied to amended independent claims 1 and 21 which now recite *"an isochronous memory that is dedicated for storing only said priority information, said memory device also including an asynchronous memory for storing only asynchronous data on a non-priority basis, said memory device being reconfigurable into separate memory channels that are each mapped to a different process,"* which are limitations that are not taught or suggested either by the cited references, or by the Examiner's citations thereto.

Abramson teaches a "dynamically changing draining priority in a first-in/first-out ("FIFO") device to prevent over-run errors" by referencing a "high

watermark value" (column 2, lines 2-9). Abramson is therefore limited to operation of a single FIFO device, and nowhere discusses operations in a Random-Access Memory (RAM). Furthermore, Abramson nowhere discloses reconfiguring "separate memory channels". In contrast, Applicants disclose and claim reconfiguring a memory device to dynamically create "separate memory channels that are each mapped to a different process." Applicants therefore respectfully submit that Abramson fails to teach all the elements of independent claims 1 and 21.

With regard to claims 1-17, 21-37, and 41-51, the Examiner concedes that Abramson does not specifically disclose all of Applicants' claimed limitations. Applicants concur. The Examiner then points to Kwon to purportedly remedy these deficiencies. Applicants respectfully traverse. Kwon is limited to only teaching a method for extending the total number of isochronous channels available in a 1394 serial bus (see column 2, line 55 to column 3, line 45).

Therefore, Kwon nowhere discusses an "asynchronous memory" segregated for storing only non-isochronous data on a "non-priority basis" that is implemented in conjunction with an "isochronous memory" that is segregated for storing only isochronous data "on a priority basis". Applicants therefore submit that the combination of Abramson and Kwon fail to teach all the elements of Applicants claimed invention. Applicants therefore submit that the foregoing rejections under 35 U.S.C. § 103 are improper.

With regard to claim 51, "means-plus-function" language is utilized to recite elements and functionality similar to those recited in claims 1 and 21 as

discussed above. Applicants therefore incorporate those remarks by reference with regard to claim 51. In addition, the Courts have frequently held that "means-plus-function" language, such as that of claim 51, should be construed in light of the Specification. More specifically, means-plus-function claim elements should be *construed to cover the corresponding structure, material or acts described in the specification,* and equivalents thereof.

Applicants respectfully submit that, in light of the substantial differences between the teachings of Abramson/Kwon and Applicants' invention as disclosed in the Specification, claim 51 is therefore not anticipated or made obvious by the teachings of Abramson/Kwon. Applicants specifically direct the Examiner's attention to Applicants' discussion of FIGS. 8-10 (Specification, page 14, line 25 through page 17, line 19) which describes in detail the Applicants' claimed "means for configuring a memory device . . . ."

Regarding the Examiner's rejection of dependent claims 2-7, 9-17, 22-27, 29-37, and 39-49, for at least the reasons that these claims are directly or indirectly dependent from respective independent claims whose limitations are not identically taught or suggested, the limitations of these dependent claims, when viewed through or in combination with the limitations of the respective independent claims, are also not identically taught or suggested. Applicants therefore respectfully request reconsideration and allowance of dependent claims 2-7, 9-17, 22-27, 29-37, and 39-49, so that these claims may issue in a timely manner.

In addition, with regard to dependent claims 8 and 28, Applicants submit that both Abramson and Kwon fail to disclose "memory registers" that are implemented to include the claimed limitations of claims 8 and 28. Furthermore, with regard to dependent claims 9 and 29, Applicants submit that neither Abramson and Kwon teach or discuss "channel registers" that are implemented to include the claimed elements from claims 9 and 29. Finally, with regard to dependent claims 10 and 30, Applicants submit that neither Abramson and Kwon disclose a "channel setup request" that includes the claimed limitations recited in claims 10 and 30.

For at least the foregoing reasons, the Applicants submit that claims 1-17, 21-37, and 41-51 are not unpatentable under 35 U.S.C. § 103 over Abramson in view of Kwon, and that the rejections under 35 U.S.C. § 103 are thus improper. The Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 1-17, 21-37, and 41-51 under 35 U.S.C. § 103.

35 U.S.C. § 103

In paragraph 4 of the Office Action, the Examiner rejects claims 18-20 and 38-40 under 35 U.S.C. § 103 as being unpatentable over Abramson in view of U.S. Patent No. 6,072,796 to Christensen et al. (hereafter Christensen). The Applicants respectfully traverse these rejections for at least the following reasons.

Applicants maintain that the Examiner has failed to make a *prima facie* case of obviousness under 35 U.S.C. § 103(a) which requires that three basic criteria must be met, as set forth in M.P.E.P. §2142:

"First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

The initial burden is therefore on the Examiner to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Applicants respectfully traverse the Examiner's assertion that modification of the device of Abramson according to the teachings of Christensen would produce the claimed invention. Applicants submit that Abramson in combination with Christensen fail to teach certain of the claimed elements of the present invention. The Applicants therefore respectfully submit that the obviousness rejections under 35 U.S.C §103 are improper.

Regarding the Examiner's rejection of independent claims 18 and 38, Applicants respond to the Examiner's §102 rejection as if applied to amended independent claims 18 and 38, which now recite a *"memory device comprising an isochronous memory, said isochronous memory including a memory controller, one or more memory channels, and memory registers, said memory device also including an asynchronous memory for storing only asynchronous data on a non-priority basis,"* which are limitations that are not taught or suggested either by the cited references, or by the Examiner's citations thereto.

The Court of Appeals for the Federal Circuit has held that "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination." In re Geiger, 815 F.2d 686, 688, 2 U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987). Applicants submit that there is no teaching of a combination that would result in Applicants' invention, and therefore the obviousness rejection under 35 U.S.C §103 is not proper.

Regarding the Examiner's rejection of dependent claims 19-20 and 39-40, for at least the reasons that these claims are directly or indirectly dependent from respective independent claims whose limitations are not identically taught or suggested, the limitations of these dependent claims, when viewed through or in combination with the limitations of the respective independent claims, are also not identically taught or suggested. Applicants therefore respectfully request reconsideration and allowance of dependent claims 19-20 and 39-40, so that these claims may issue in a timely manner.

For at least the foregoing reasons, the Applicants submit that claims 18-20 and 38-40 are not unpatentable under 35 U.S.C. § 103 over Abramson in view of Christensen, and that the rejections under 35 U.S.C. § 103 are thus improper. The Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 18-20 and 38-40 under 35 U.S.C. § 103.

Summary

Applicants submit that the foregoing amendments and remarks overcome the Examiner's objections and rejections to claims 1-51. Because the cited references, or the Examiner's citations thereto, do not teach or suggest the claimed invention, and in light of the differences between the claimed invention and the cited prior art, Applicants therefore submit that the claimed invention is patentable over the cited art, and respectfully request the Examiner to allow claims 1-51, so that the present Application may issue in a timely manner. If there are any questions concerning this amendment, the Examiner is invited to contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,

Date: 4/6/04

By: _____

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